When the patient is in bed instructions should be given to lie on the abdomen or on the sides as much as possible. After becoming ambulatory an abdominal support should be worn until an appropriate weight gain is attained. All patients should be instructed to take postural exercises. The knee-chest position and the Goldthwaite diaphragmatic exercises prove beneficial in developing tone to the muscles of the abdominal wall which in turn helps to alleviate the visceroptosis.

Massage, abdominal and general, electrotherapy and hydrotherapy, and tonics, all contribute to the general physical improvement.

Duodenojejunostomy has been performed with very satisfactory results. It is, without doubt, the operation of choice. If a duodenal ulcer is associated with a duodenal occlusion, Wilkie and others recommend a combined gastro-enterostomy and duodenojejunostomy.

All patients suffering from a functional ileus should have the advantage of an adequate medical regimen before surgery is attempted.

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CARCINOID APPENDIX

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INFLAMMATIONS of the appendix are common. From a clinical standpoint they are divided into the acute and chronic types. Sections are easy to diagnose and, as a rule, present no unusual features. Tumors of the appendix are rare. They may be benign or malignant, primary or secondary. Benign tumors are unusual. Deaver, in his extensive appendiceal work, demonstrated fibroleiomyoma only on one or two occasions.[1] MacCarthy of the Mayo Clinic showed approximately that one in 225 appendices removed is cancerous at the tip. The clinical course of a malignancy of the appendix is that of a chronic interstitial appendicitis. It can only be diagnosed by appendectomy and section. Of the two types of epithelial tumors arising in the appendix, we find: (1) True carcinomata; and (2) a nonmalignant tumor which presents on section, according to H. Reid and H. Smith,[2] "an endothelial proliferation resulting from inflammation of displaced epithelial cells. The usual round-cell infiltration is absent and the connective tissue retains its acidophilic properties." The term "carcinoid" has been applied to this second type.

Regarding the above pathologic diagnosis, the following case history of an appendix recently removed is presented.

REPORT OF CASE

History.—The patient, a female, age fifty-two, white and married, the mother of two grown children, with a negative pelvic history, was admitted to the Queen of the Angels Hospital on May 17, 1932. She complained of a bearing-down pain in the lower right abdominal region, extending over to her bladder. This pain started early Sunday morning, May 15, 1932, and persisted all day. During the day she passed a great deal of gas. She was not nauseated nor did she vomit. Sunday afternoon she took an enema without relief of pain. Sunday night the pain extended over toward her right groin. The pain persisted all day Monday, without any other symptoms and no elevation of temperature. Tuesday morning she vomited for the first time, after a dose of Epsom salts. A physician was called and the examination revealed slight pain, some rigidity, and a moderate degree of tenderness over the right iliac fossa. Her temperature, pulse, and respiration were normal. A diagnosis of an acute appendicitis was made and the patient was removed to the Queen of the Angels Hospital. Her blood count at that time showed a 99 per cent hemoglobin. A color index of 0.86 erythrocytes, 5,664,000 which appeared normal. Her leukocytes were 11,500 with small lymphocytes of 18 per cent, transitional 2 per cent, and polymorphonuclears of 80 per cent. An internal examination demonstrated the pelvis to be negative. An examination of the cervix with the speculum showed a slight enlargement, redness and protrusion of the mucous membrane into the cervical canal. A flat K-U-B picture was negative, as was the urine, blood pressure, and Wassermann.

Operation.—A low spinal anesthetic was administered, and a mid-line incision extending from the pubic bone to the umbilicus was employed. A mass the size of a hen's egg was palpated in the ileocecal region. On gentle separation of the terminal ileum from the cecum, a gelatinous mass resembling mucus, about two drams in amount, was observed protruding from the side of the appendix. A small hole in the side of a rather broadened appendix, which resembled a diverticulum, permitted the escape of more of the same material. The appendix was removed. Pagenstecher linen was employed throughout. There was no thickening of the appendiceal base. An inspection of the abdomen was negative, with the exception of the gallbladder, which was enlarged and contained several stones. The abdomen was closed in the usual manner without drainage. A small section of the cervix was removed and sent to the laboratory for diagnostic purposes. The report from the cervical section was negative. The patient made an uneventful recovery and left the hospital on the eighth day.

Pathologic Report.—Paraffin sections were made from four blocks of the appendix. Section from one block showed the epithelium to be thrown up into papillary or serrated projections. Each one has a small central core with several layers of large epithelial cells, some having hyperchromatic nuclei. A number of mitotic figures are seen. There is no invasion of the fibrous tissue beneath. There is some round-cell infiltration in the submucosa. In the muscle wall there are longitudinal clear spaces, showing a fibrinous-like network in which are seen round cells and eosinophils. The serous surface is thickened and fatty, and shows scattered round cells.

Another section shows a hyperplasia of the superficial epithelium without the papillary appearance. There are irregular glands with epithelial cells like those in the first section. In places there are masses of epithelial cells beneath the surface. Each mass has an irregular lumen. These masses are only a short distance beneath the surface and may be due to tangenital section. In the muscle and fibrous tissue there is a marked round cell and eosinophilic infiltration. . . . Section of a third block gives a picture like that of the first block. . . . Sections from a fourth block show

large areas having a fibrilla structure in the meshes of which is basic staining, colloid-like material. There are thick bands of fibrous tissue between the colloid areas and the trabeculae dividing up the area. The fibrous tissue shows round cell and eosinophilic infiltration and scattered polymorphonuclear leukocytes.

The appearance is that of a colloid carcinoma which in the appendix is very benign. They are called carcinoids.

Diagnosis: Carcinoid of the appendix.

COMMENT

According to E. S. J. King,[3] "epithelial tumors arising in the appendix are of two kinds: (1) true carcinomata, rare in occurrence; (2) nonmalignant carcinoids, more common." Carcinoid tumors occur usually in young people and are observed in about 0.4 per cent of all appendiceal lesions in King's experience. Carcinoid tumors may occur in any part of the alimentary canal from the cardia to the anus, but are usually noted in the region of the appendix, in which location the following types have been observed:

1. A hard, circumscribed nodule at the tip of the appendix which measures up to 18 millimeters in diameter and when sectioned has a uniform yellow color.

2. A nodule obliterating the lumen of the tube.

3. Rare diffuse type resulting from invasion of the muscular layer by the tumor cells.

4. The multiple tumor masses.

The most likely theory concerning the origin of these tumors is that they are (1) entodermal, and (2) ectodermal. The structure of the typical tumor with its spheroidal argentaffin cells, that is, cells containing granules capable of reducing silver preparations, closely resembling the structure of many brain tumors, gliomata of the retina, neurocytomata of the adrenal and other neoplasms of the nervous tissue origin. On this account King believes that these carcinoid tumors arise from nervous cells most likely derived from the sympathetic system.

H. Reid and H. Smith [4] state that the condition as a rule is benign but several cases of metastasis to the liver, the peritoneum, and the lymph nodes are on record. The growth as a rule is confined to the mucous and the submucous layers, with a tendency to infiltrate into the muscularis. Various types of cells include the spheroid (the most common type), cuboidal, cylindrical, endothelial, and mixed types. Colloid degeneration has also been noted.

Of primary interest in this case is the diagnosis of a carcinoid appendix which is considered a nonmalignant epithelial tumor. According to H. Reid there are, nevertheless, on record several cases of metastasis to the liver, peritoneum, and the lymph nodes.[5]

Of added interest, and a factor which should not be overlooked on account of subsequent possible pathology, is the gelatinous material which was observed protruding from the side of the ruptured appendix. No report was returned on this material although it was sent to the laboratory with the appendix for diagnosis. It is a well-known fact that leakage from a mucocele of the appendix may spread throughout the peritoneal cavity and cause death from mechanical obstruction. According to Frank, in his book on gynecological pathology, he states: "In the majority of cases epithelial cells are contained in the pseudomucinous mass. These cells continue to secrete, form gland complexes and cysts. No invasive tendency is shown, the organ being wrapped (but not penetrated) in a jelly-like envelope. Because of the physical properties, the peritoneum cannot readily absorb the gelatinous substance which closes the subperitoneal lymphatics. A foreign body peritonitis results. (Granulation tissue, giant cell and connective tissue production, endothelial proliferation.) The cellular elements produced by the peritoneum penetrate the inert colloid and form septa and encapsulated masses. If the source of supply is not cut off by removal of the primary focus, or if secreting cells are contained in the jell, incredibly large amounts of pseudomucin may be produced. Biggs removed 350 pounds of this material in twelve operations in a period of nine years before the patient died at seventy-five. A few cures are reported after repeated operation; seventeen recoveries in forty cases."

V. Lieblein,[6] writing of rupture of appendiceal mucocele, refers to thirty-five surgically treated cases of pseudomyxoma peritonei of appendiceal origin in which nine deaths occurred.

Since the operation of this patient three months ago, she has complained of a fullness and soreness to the right of her bladder. The patient will be carefully watched and reported on, if any unusual symptoms occur.

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FOREIGN BODY IN THE ISCHIORECTAL SPACE

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MANY cases have been reported in which chicken bones, fish bones, seeds, and similar small objects have been recovered from diseased crypts of Morgagni; and that upon removal of these there has been almost immediate relief from symptoms. At times, fish bones, or rather small foreign bodies, have penetrated the rectal mucosa and entered the ischiorectal spaces, where an in-